

1 This work plan presents an evaluation of available data to determine data needs. Information concerning
2 the nature and extent of contamination at waste sites was assessed to determine whether sufficient data
3 exist to evaluate risks and consequently develop an appropriate remedial decision. Based on the data
4 collected during the RI/RFI, a treatability test may be conducted for a 200-DV-1 OU contaminant
5 mitigation technology.

6 4.2 Data Quality Objectives Evaluation

7 The Tri-Parties conducted a supplemental DQO evaluation in 2005 and 2006 to review all process and
8 characterization data available for the Central Plateau waste sites and to identify residual data needs.
9 The elements of the supplemental DQO were integrated into the supplemental work plan
10 (DOE/RL-2007-02), which was issued in 2007. The supplemental work plan included a SAP for the
11 collection of additional data at those waste sites for which existing data were determined to be insufficient
12 for decision-making purposes.

13 In early 2011, DOE and Ecology met with Hanford Site technical experts for a series of facilitated DQO
14 sessions. These sessions reviewed the current state of knowledge for the 200-DV-1 OU sites and
15 developed principal study questions (PSQs), decision statements, alternative actions, and other data
16 objectives and requirements. The data needs were then determined on a site-by-site basis to address the
17 PSQs. The sampling and analysis recommendations in the existing Central Plateau supplemental work
18 plan (DOE/RL-2007-02) were then modified as needed to address the 200-DV-1 OU data needs. Through
19 this process, a final set of data requirements was derived. The 200-DV-1 OU data needs and the results
20 of the completed DQO process for the 200-DV-1 OU waste sites are provided in Appendix C of this
21 work plan. This DQO was used to develop the agency-approved SAP (DOE/RL-2011-104).

22 4.3 Data Needs for 200-DV-1 Operable Unit Waste Sites

23 A summary of the data needs for the 200-DV-1 OU waste sites is presented in Table 4-1. The data needs are
24 based on the outcome of the DQO evaluation (Appendix C). The data needs presented in this chapter
25 represent specific data gaps with respect to the CSM for each site (or site group) and primarily focus on
26 establishing nature and extent of contaminants in support of the PSQs. The data also provide baseline data
27 that will be needed to support an assessment of the groundwater potential exposure pathway (PSQ 2).
28 However, the method of assessing impact to groundwater may require some additional information as part
29 of fully addressing PSQ 2. Initial efforts under the work plan will include defining the assessment
30 approach, anticipated to include estimating the temporal profile of contaminant flux to groundwater and
31 linking this assessment to potential exposure path and compliance considerations.

32 In addition to the data needs in Table 4-1, risk evaluations for direct contact (human health) and
33 ecological receptors could require additional data for the shallow vadose zone. These data will be used to
34 provide quantitative risk characterization for the top 3 or 4.6 m (10 or 15 ft) of the vadose zone. This data
35 need requires the development of a supplemental shallow characterization SAP for 200-DV-1 OU
36 waste sites.

Two data needs were identified during the 200-DV-1 OU RI/FS and RFI/CMS process: characterization of contaminant attenuation processes and characterization of shallow vadose zone soils.

The first supplemental DQO process was used to determine what additional data (if any) would be needed to understand the controlling features and processes of contaminant transport through the vadose zone that may impact groundwater. DOE/RL-2011-104-ADD1, Characterization Sampling and Analysis Plan for the 200-DV-1 Operable Unit Addendum 1: Attenuation Process Characterization, presents the results from this supplemental DQO process and identifies the sample intervals and supplemental analyses to be performed on soil cores previously collected during implementation of the initial SAP.

A second supplemental DQO process was used to determine what additional data (if any) would be needed to characterize the shallow portion of the 200-DV-1 OU waste sites to evaluate an alternative point of compliance of 3.0 m (10 ft) bgs. The DQO also addressed the need for additional samples from 3.0 to 4.6 m (10 to 15 ft) bgs at 200-DV-1 OU waste sites. DOE/RL-2011-104-ADD2, Characterization Sampling and Analysis Plan for the 200-DV-1 Operable Unit Addendum 2: Supplemental Shallow Soil Risk Characterization Sampling, presents the results from this supplemental DQO process and identifies the supplemental shallow soil sampling design and laboratory analytical methods.

37 4.4 Data Needs for 200-DV-1 Operable Unit Perched Water

38 A summary of the data needs for the 200-DV-1 OU perched water wells installed in 2014 is presented
39 in Table 4-2.

1 5.2.1 Tribal Consultation

2 Interactions between the area tribes and RL are facilitated through the RL Tribal Program Manager or the
 3 RL Cultural Resources Program Manager. RL interacts primarily with the Confederated Tribes and Bands
 4 of the Yakama Nation, the CTUIR, the Nez Perce Tribe, and the Wanapum Band of Indians. Tribal
 5 consultation is in accordance with DOE O 144.1, *Department of Energy American Indian Tribal*
 6 *Government Interactions and Policy*. RL consults and communicates regularly with tribal program staff
 7 as well as offers tribal consultation to tribal governments and will consult with a tribal government upon
 8 its request. RL conducts regularly scheduled and ad hoc meetings with tribes based on tribal interest and
 9 needed tribal input and involvement. RL will continue to work with area tribes to ensure ongoing
 10 communication and involvement in the Inner Area decision-making process. EPA also has a government-
 11 to-government responsibility and will coordinate with RL on consultation with tribes.

12 This effort will include timely notice to area tribes on decisions that might affect their rights and/or
 13 resources in the early stages of the decision-making process.

14 5.2.2 Stakeholder Involvement

15 Stakeholders are individuals who are affected by, or have an interest in, Hanford Site issues. Hanford Site
 16 stakeholders include the Hanford Natural Resources Trustees; local governments; local and regional
 17 businesses; Hanford Site work force; local, regional, and national environmental groups; and local and
 18 regional public health organizations.

19 The HAB is a site-specific advisory board chartered under the *Federal Advisory Committee Act of 1972*.
 20 The HAB advises the Tri-Parties on cleanup issues. The HAB's River and Plateau Committee addresses
 21 River Corridor and Central Plateau issues and meets approximately 10 times each year. On the basis of
 22 the timing of the development of significant work plan components, periodic updates will be provided to
 23 the River and Plateau Committee.

24 The River and Plateau Committee provides an ongoing opportunity for informal stakeholder feedback on
 25 work plan components and evolving project activities. The committee decides if an issue should be
 26 brought to the full HAB, which then determines whether formal advice should be issued.

27 5.3 Task 3 – Field Investigations and Analytical Tasks

28 Field investigations and analytical tasks will be conducted for the 200-DV-1 OU RI/FS and RFI/CMS to
 29 supplement existing data. The field investigations and data analysis activities will address the data needs
 30 defined in Chapter 4. The data needs were identified through the DQO process that was completed for the
 31 200-DV-1 OU waste sites (Section 4.2 and Appendix C). The DQO process for sampling during drilling
 32 of two new perched water wells was developed in 2013 (DOE/RL-2013-52).

33 The scope of the field investigations are described in two SAPs associated with this work plan. Each SAP
 34 provides the QAPjP and the field sampling plan for the characterization activities.

35 The sampling activities for the 200-DV-1 OU waste sites are summarized in Table 5-2, and additional
 36 details are provided in the 200-DV-1 OU characterization SAP (DOE/RL-2011-104). The SAP describes
 37 the types of analyses to be performed; the samples to be analyzed; and the precision, accuracy,
 38 representativeness, completeness, and comparability parameters to be used in order to obtain a sufficient
 39 representation of conditions at the site. The BY Cribs in the B Complex area are anticipated to be the
 40 focus of the initial characterization activities.

Two supplemental SAPs were prepared as addenda to DOE/RL-2011-104 during the RI and RFI
 characterization process. DOE/RL-2011-104-ADD1, Characterization Sampling and Analysis Plan for the
 200-DV-1 Operable Unit Addendum 1: Attenuation Process Characterization, identifies the sample

intervals and supplemental analyses to be performed on soil cores previously collected during implementation of the initial SAP. The information obtained from sampling will provide further understanding of fate and transport mechanisms (e.g., natural attenuation processes) and will support the evaluation of remedy selection (Section 5.10). DOE/RL-2011-104-ADD2, Characterization Sampling and Analysis Plan for the 200-DV-1 Operable Unit Addendum 2: Supplemental Shallow Soil. Risk Characterization Sampling, presents the results identifies the supplemental shallow soil sampling design and laboratory analytical methods. The information obtained from this sampling will be used to evaluate an alternative point of compliance of 3.0 m (10 ft) bgs and characterize risk to human health and the environment (Section 5.6).

1

6 Project Schedule

2 Figure 6-1 shows the project schedule for the activities described in this work plan. The schedule will be
3 evaluated to identify efficiencies, will serve as the baseline for the work planning process, and will be
4 used to measure the progress of implementing this work plan.

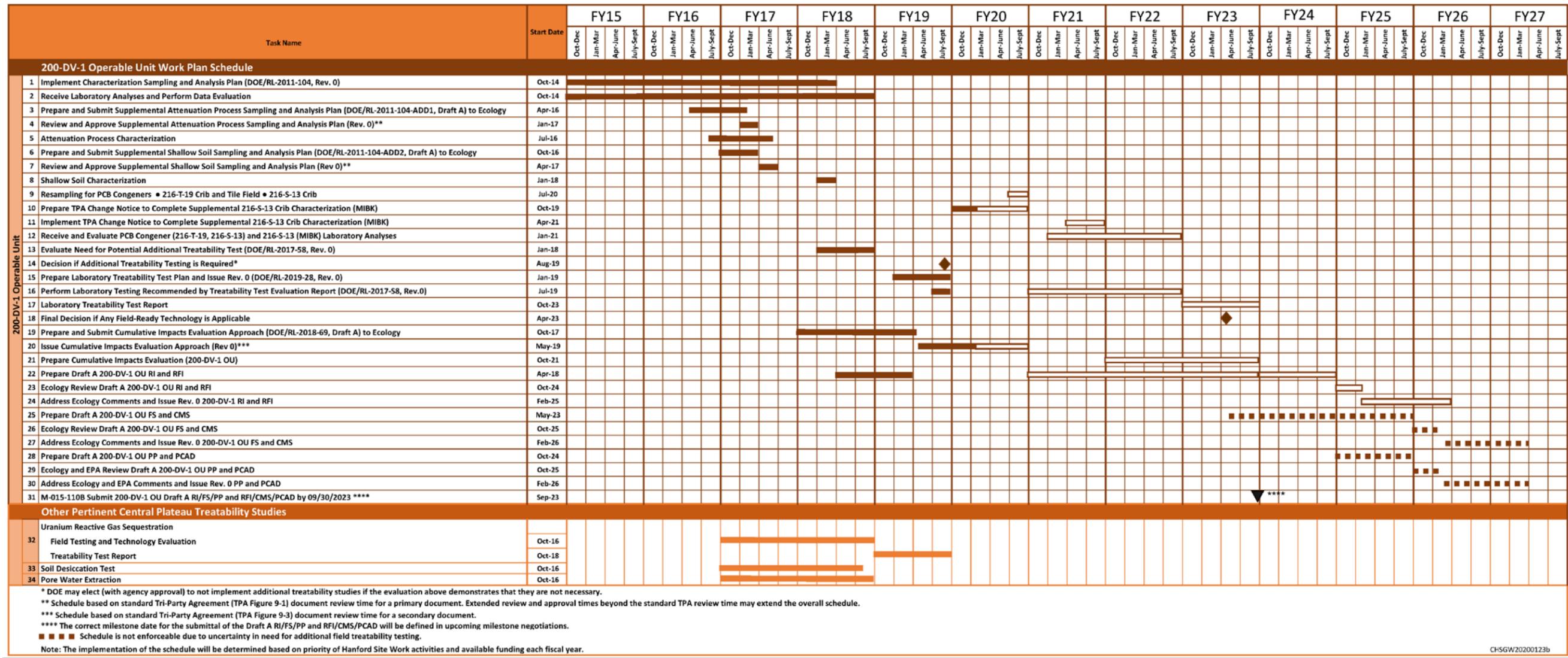
5 The schedule includes Tri-Party Agreement (Ecology et al., 1989a) milestones, field activities, and start
6 dates. Any revisions to the project schedule will be in accordance with Section 11.4 of the
7 Tri-Party Agreement.

8 Preparation of the 200-DV-1 OU work plan was initiated in 2010. The Tri-Parties agreed in 2011 to delay
9 completion of the work plan but to proceed with preparation of the 200-DV-1 OU SAP for characterizing
10 waste sites (DOE/RL-2011-104). The 200-DV-1 OU SAP for drilling and characterizing two perched
11 water wells has also been completed (DOE/RL-2013-52) prior to completion of the work plan.

12 Evaluation of the alternative point of compliance (discussed in Sections 1.3.2 and 5.6) requires the
13 development of a supplemental shallow characterization SAP for 200-DV-1 OU waste sites.

Two supplemental SAPs were prepared as addenda to DOE/RL-2011-104. DOE/RL-2011-104-ADD1, Characterization Sampling and Analysis Plan for the 200-DV-1 Operable Unit Addendum 1: Attenuation Process Characterization, and DOE/RL-2011-104-ADD2, Characterization Sampling and Analysis Plan for the 200-DV-1 Operable Unit Addendum 2: Supplemental Shallow Soil. Risk Characterization Sampling, were implemented during the RI and RFI characterization process.

Task Name	Start Date	FY15			FY16			FY17			FY18			FY19			FY20			FY21			FY22			FY23		
		Oct-Dec	Jan-Mar	Apr-June	July-Sept	Oct-Dec	Jan-Mar	Apr-June	July-Sept	Oct-Dec	Jan-Mar	Apr-June	July-Sept	Oct-Dec	Jan-Mar	Apr-June	July-Sept	Oct-Dec	Jan-Mar	Apr-June	July-Sept	Oct-Dec	Jan-Mar	Apr-June	July-Sept	Oct-Dec	Jan-Mar	Apr-June
200-DV-1 Operable Unit Work Plan Schedule		CY																										
Implement Characterization Sampling and Analysis Plan (DOE/RL-2011-104, Rev. 0)	Oct-14	[Gantt bar spanning Oct-14 to Oct-14]																										
Receive Laboratory Analyses and Perform Data Evaluation	Oct-14	[Gantt bar spanning Oct-14 to Oct-14]																										
Evaluate Need for Potential Additional Treatability Test	Jan-18	[Gantt bar spanning Jan-18 to Jan-18]																										
Perform Additional Treatability Testing*	Apr-17	[Gantt bar spanning Apr-17 to Apr-17]																										
<ul style="list-style-type: none"> Decision if Additional Treatability Testing is Required Submit Draft A Treatability Investigation Work Plan to Ecology Ecology Review and Approval Draft A Treatability Investigation Work Plan Initiate Additional Treatability Test Field Work Submit Draft A Additional Treatability Investigation Evaluation Report to Ecology 		[Gantt bars for sub-tasks: Apr-17 to Apr-17, Apr-17 to Apr-17, Apr-17 to Apr-17, Apr-17 to Apr-17, Apr-17 to Apr-17]																										
Prepare and Submit Supplemental Shallow Soil Sampling and Analysis Plan (Draft A) to Ecology	Oct-16	[Gantt bar spanning Oct-16 to Oct-16]																										
Review and Approve Supplemental Shallow Soil Sampling and Analysis Plan (Rev 0)**	Apr-17	[Gantt bar spanning Apr-17 to Apr-17]																										
Shallow Soil Characterization	Jul-17	[Gantt bar spanning Jul-17 to Jul-17]																										
Prepare and Submit Cumulative Impacts Evaluation Approach (Draft A) to Ecology	Oct-17	[Gantt bar spanning Oct-17 to Oct-17]																										
Review and Approve Cumulative Impacts Evaluation Approach (Rev 0)***	Apr-18	[Gantt bar spanning Apr-18 to Apr-18]																										
Prepare Cumulative Impacts Evaluation (200-DV-1 OU)	Jul-18	[Gantt bar spanning Jul-18 to Jul-18]																										
Prepare Draft A 200-DV-1 OU RI/FS/PP and RFI/CMS/PCAD	Sep-18	[Gantt bar spanning Sep-18 to Sep-18]																										
M-015-110B Submit 200-DV-1 OU Draft A RI/FS/PP and RFI/CMS/PCAD by 09/30/2023	Sep-23	[Gantt bar spanning Sep-23 to Sep-23]																										
Other Pertinent Central Plateau Treatability Studies		CY																										
Uranium Reactive Gas Sequestration		[Gantt bar spanning Oct-16 to Oct-16]																										
Field Testing and Technology Evaluation	Oct-16	[Gantt bar spanning Oct-16 to Oct-16]																										
Treatability Test Report	Oct-18	[Gantt bar spanning Oct-18 to Oct-18]																										
Soil Desiccation Test	Oct-16	[Gantt bar spanning Oct-16 to Oct-16]																										
Pore Water Extraction	Oct-16	[Gantt bar spanning Oct-16 to Oct-16]																										
* DOE may elect (with agency approval) to not implement additional treatability studies if the evaluation above demonstrates that they are not necessary.																												
** Schedule based on standard Tri-Party Agreement (TPA Figure 9-1) document review time for a primary document. Extended review and approval times beyond the standard TPA review time may extend the overall schedule.																												
*** Schedule based on standard Tri-Party Agreement (TPA Figure 9-3) document review time for a secondary document. Extended review and approval times beyond the standard TPA review time may extend the overall schedule.																												



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Figure 6-1. Project Schedule for the 200-DV-1 OU

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